POINDEXTER SLOUGH FISH HABITAT IMPROVEMENT PROJECT

FLOW MANAGEMENT PLAN

PREPARED FOR:

Beaverhead Watershed Committee
201 North Parkview Court
Dillon, MT 59725

PREPARED BY:

Confluence Consulting
P.O. Box 1133
Bozeman, MT 59771

October 2013

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Introduction

The Poindexter Slough Fishery Restoration project is a local restoration effort aimed at improving water quantity, habitat quality, sediment transport, and the fishery throughout the 4.73 mile length of Poindexter Slough, a side channel to the Beaverhead River. Poindexter Slough is located approximately 3 miles south of Dillon, MT. This project will restore and protect the stream and riparian corridor and will emphasize expanding fishery benefits.

The following flow management plan (FMP) is to be utilized in conjunction with infrastructure and in-stream channel improvement components of the Poindexter Slough Fish Habitat Improvement Project. Design criteria for the channel and irrigation infrastructure improvements were developed by Confluence Consulting, Montana Fish Wildlife and Parks (MFWP), the Beaverhead Watershed Committee (BWC), and the Dillon Canal Company.

The FMP provides guidelines for operating water control structures at the head of Poindexter Slough and the Dillon Canal to support habitat improvement goals while maintaining adequate irrigation supply to the Dillon Canal. The FMP has been developed merely as a guideline for flow management in Poindexter Slough. It is anticipated the FMP will evolve with future flow monitoring efforts and on-site observations of the channel's hydrogeomorphic responses to varying flow regimes. This FMP includes the project's goals and objectives, the design criteria developed to support those goals, hydrologic data to support the FMP, flow management scenarios, and monitoring recommendations to support an adaptive management strategy.

Project Goals and Objectives

Specific goals and objectives for the Poindexter Slough Habitat Improvement Project were developed by MFWP, the BWC, and the Dillon Canal Company to address fishery and irrigation project components. The following provides project goals and objectives as they pertain to the FMP.

Project Goals:

- Improve water quality/fish habitat by reducing sedimentation
- Reduce water temperature
- Improve spawning habitat
- Provide thermal refuge for brown trout
- Improve fish passage
- Improve recreational opportunity

Project Objectives:

- Creation of diverse self-maintaining trout habitat
- Reduced channel width-to depth ratio
- Vegetative bank stabilization where appropriate
- Improved sediment transport
- Modified headgate at head of Poindexter Slough to allow for flushing flows
- Modified headgate and diversion at head of the Dillon Canal to reduce backwatering and improve fish passage

Poindexter Slough Design Criteria

Several criteria were developed to support the project goals and objectives, help guide the design process, and provide a basis for post-project monitoring. Major project design components and the criteria include:

Physical Channel Parameters

The existing channel dimensions and hydrologic regime of Poindexter Slough do not support pool habitat formation and sustainable spawning features. The lack of periodic flushing flows through the slough has resulted in low pool density, shallow pools, fine sediment accumulation, and reduced habitat complexity. Specific channel parameter design criteria to support improved sediment transport, pool formation, and resorting of spawning gravels include:

1. Channel dimensions (width, depth, and slope) will be capable of mobilizing fine grained bed materials during base flows (20-50 cfs) to reduce fine sediment accumulation and maintain habitat features.
2. Channel dimensions will be sized to mobilize gravels <1.2" during flushing flows.
3. Channel dimensions will vary along the length of Poindexter Slough, taking into consideration approximately 30-45 cfs of anticipated groundwater and surface water inputs, and 35 cfs of irrigation outputs to the Dillon Canal during the irrigation season.

Hydrologic Parameters

Hydrologic design criteria to support improved sediment transport, pool formation, and resorting of spawning gravels include:

1. Base flows will be 20-50 cfs as measured at the head of Poindexter Slough.
2. Flushing flows will be approximately 200 cfs as measured at the head of Poindexter Slough.
3. Flushing flows will be generated every 2-5 years to mimic a natural hydrologic regime.
4. Flushing flows will be maintained for 7-10 days.

Channel Hydraulics

Hydraulic design parameters, including velocity and water depth are important to consider in areas where spawning activity is anticipated. In order to improve channel conditions during spawning seasons, the following hydraulic design criteria have been developed at riffle features:

1. Channel velocity at riffles during base flows will range from 0.33 to 2.95 ft/sec.
2. Channel depth at riffles during base flows will be >0.5 ft.

Dillon Canal Irrigation Demands

A primary goal of the project is to ensure delivery of irrigation water to the Dillon Canal while improving fisheries habitat in Poindexter Slough. The following criteria were utilized to develop channel and infrastructure designs to ensure delivery of irrigation water to the Dillon Canal during the irrigation season (approx. May 1 to Nov 1).

1. Typical irrigation demand is 35 cfs.
2. Up to 60 cfs can be diverted down the canal during irrigation season.

Groundwater Influence and Hydrology of Poindexter Slough

Synoptic Flow Monitoring

Discharges in Poindexter Slough are highly influenced by surface and groundwater inputs and irrigation withdraws. In an attempt to quantify the influence of these factors prior to designing the restoration project, Confluence performed a series of synoptic flow measurements along the length of Poindexter Slough in 2012 (Figure 1). Results of these data were combined with flow data collected by FWP in 2010 and 2011 (Figure 2) to develop a prediction of discharge along the length of Poindexter Slough, and to assist in developing appropriate channel dimensions to satisfy the design criteria.

Results of the synoptic flow monitoring indicate in general, Poindexter Slough gains approximately 17-32 cfs between the upstream headgate and the Dillon Canal and gains 13-14 cfs between the Dillon Canal and the mouth of Poindexter Slough at the Beaverhead River. Total gains along the length of Poindexter Slough ranged from 30-47 cfs. The synoptic flow results indicate a withdrawal of between 22 and 32 cfs from Poindexter Slough to the Dillon Canal. Although the Dillon Canal has legal water rights for up to approximately 65 cfs, a normal operating discharge of 35 cfs was utilized to develop this Flow Management Plan.

Beaverhead River and Poindexter Slough Hydrology

Figure 3 provides an estimated hydrograph of the Beaverhead River at the Poindexter Slough headgate. The discharge values were formulated by subtracting the mean daily discharge of the East Bench Irrigation Canal from the mean daily discharge on Beaverhead River obtained from USGS Stream Gage Data from Barrett's Gage #06016000. The mean daily discharge at Clark Canyon Dam is also illustrated in Figure 3. It is assumed that no additional significant gains or losses occur between the East Bench Irrigation District's headgate and the Poindexter Slough headgate. The hydrograph is based on gage data from 1997 to 2012.

Low flow discharges from November to March were not available from gage data. Historical average discharge data for the Clark Canyon Reservoir was obtained from the Bureau of Reclamation to provide estimated low flow discharges. Forty cfs was added to the low flow discharges obtained from the Bureau of Reclamation based on anecdotal evidence that the Beaverhead is a gaining stream through this reach. This value was determined based on mean daily discharges recorded at the beginning and end of the gaged data. The operating plan for the Clark Canyon Reservoir states that whenever an adequate water supply is available, releases from the Dam will be maintained between 100-200 cfs During below normal years, dam releases may be reduced to as low as 25-30 cfs.

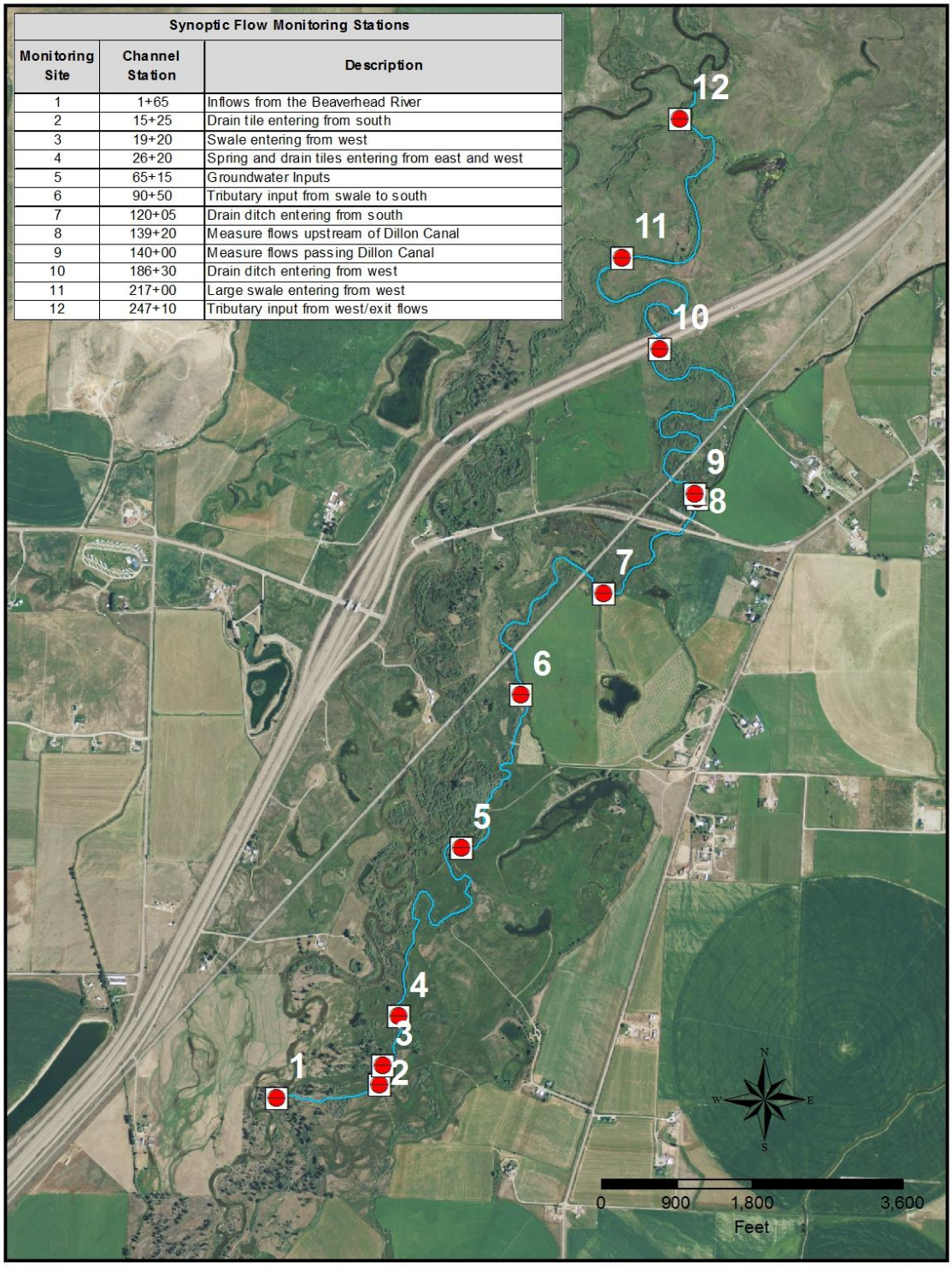


Figure 1. Location of synoptic flows in Poindexter Slough, 2012

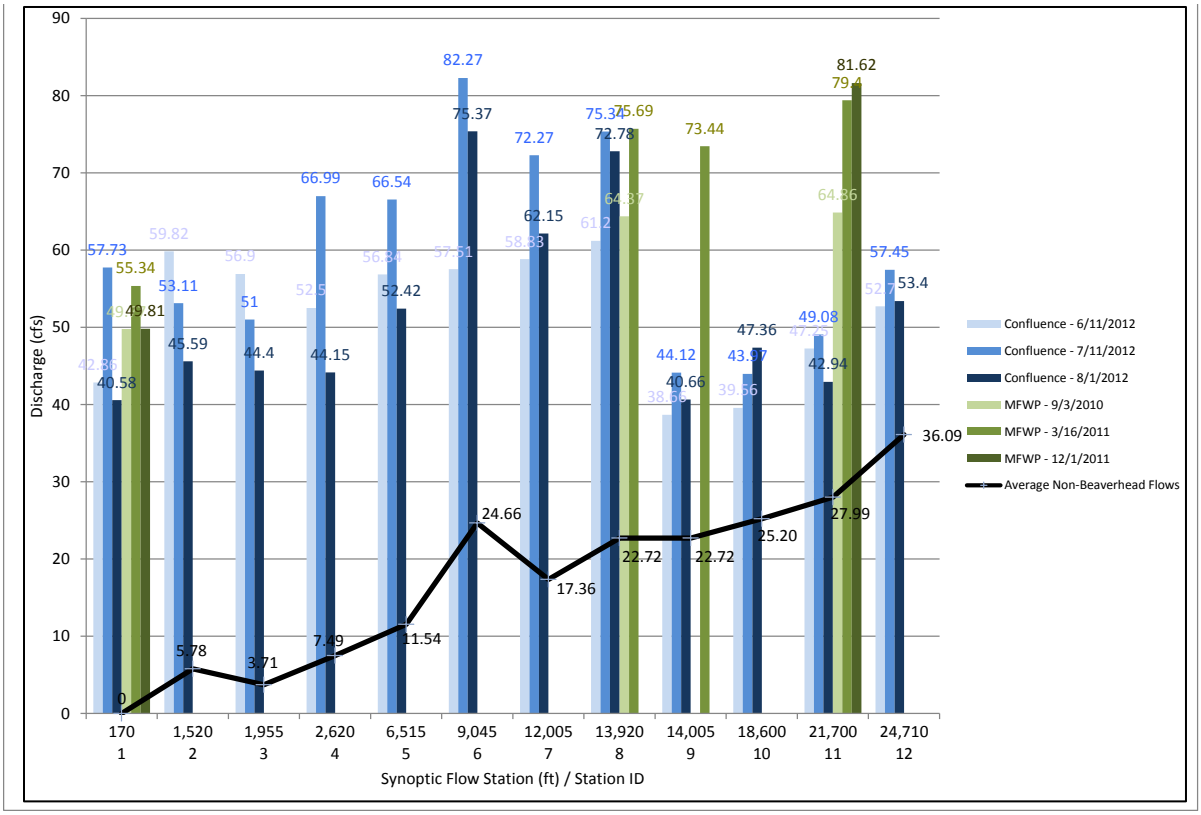


Figure 2. Synoptic flow monitoring results, Poindexter Slough

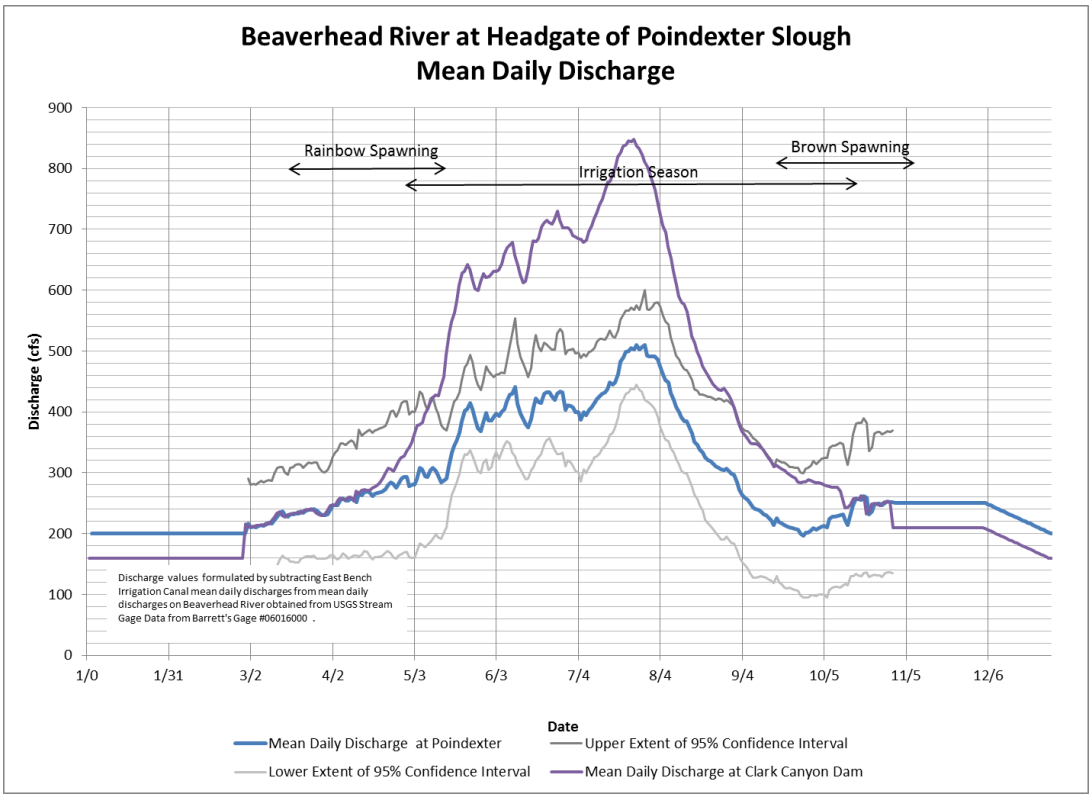


Figure 3. Estimated discharge in the Beaverhead River at the Poindexter Slough headgate

Proposed Flow Management Scenarios for Poindexter Slough

The FMP proposes two distinct flow regimes for Poindexter Slough including base and flushing flows. Descriptions of each flow regime and the recommended timing and discharges for each flow regime are included below.

Base Flows

Typical base flows should range from 20-50 cfs as measured at the head of Poindexter Slough. This range of flows provides adequate velocities to transport fine sediments and maintain pool/riffle features, provides suitable spawning habitat for trout (velocity and depth at riffles) and maintains recreational fishing opportunity throughout the stream. A base flow of 50 cfs in Poindexter Slough should be maintained whenever flows in the Beaverhead River allow. Base flows may be reduced from 50 cfs to as low as 20 cfs, but should only occur if Beaverhead River discharges cannot support diverting 50 cfs into Poindexter Slough without compromising habitat in the mainstem Beaverhead River. Flows should not fall below 50 cfs during the irrigation season (May 1 – October 15) to meet water right demands in the Dillon Canal. It is recommended that base flows not be reduced below 20 cfs at any time as measured at the head of Poindexter Slough to maintain suitable fish habitat and sediment transport.

Flushing Flows

Flushing flows should be provided with a frequency of once every 2-5 years to mimic a natural hydrologic regime and to meet habitat goals of the enhancement project. The ability to provide a flushing flow in Poindexter Slough will depend on the available discharge in the Beaverhead River, as the capacity of the gates at the head of the slough is dependent on the stage of the river. Figure 4 provides a discharge relationship between the Beaverhead River and Poindexter Slough at the headgate with newly developed operating scenarios based on replacement of the existing headgate. The figure indicates that in order to divert 200 cfs down Poindexter Slough (with new irrigation structure in place), the Beaverhead River must have approximately 530 cfs at the Poindexter Slough headgate. The estimated 2-year return interval in the Beaverhead River at the Poindexter Slough headgate is 630 cfs; therefore, it is reasonable to assume that the hydrologic conditions necessary to produce a 200 cfs flushing flow should occur regularly.

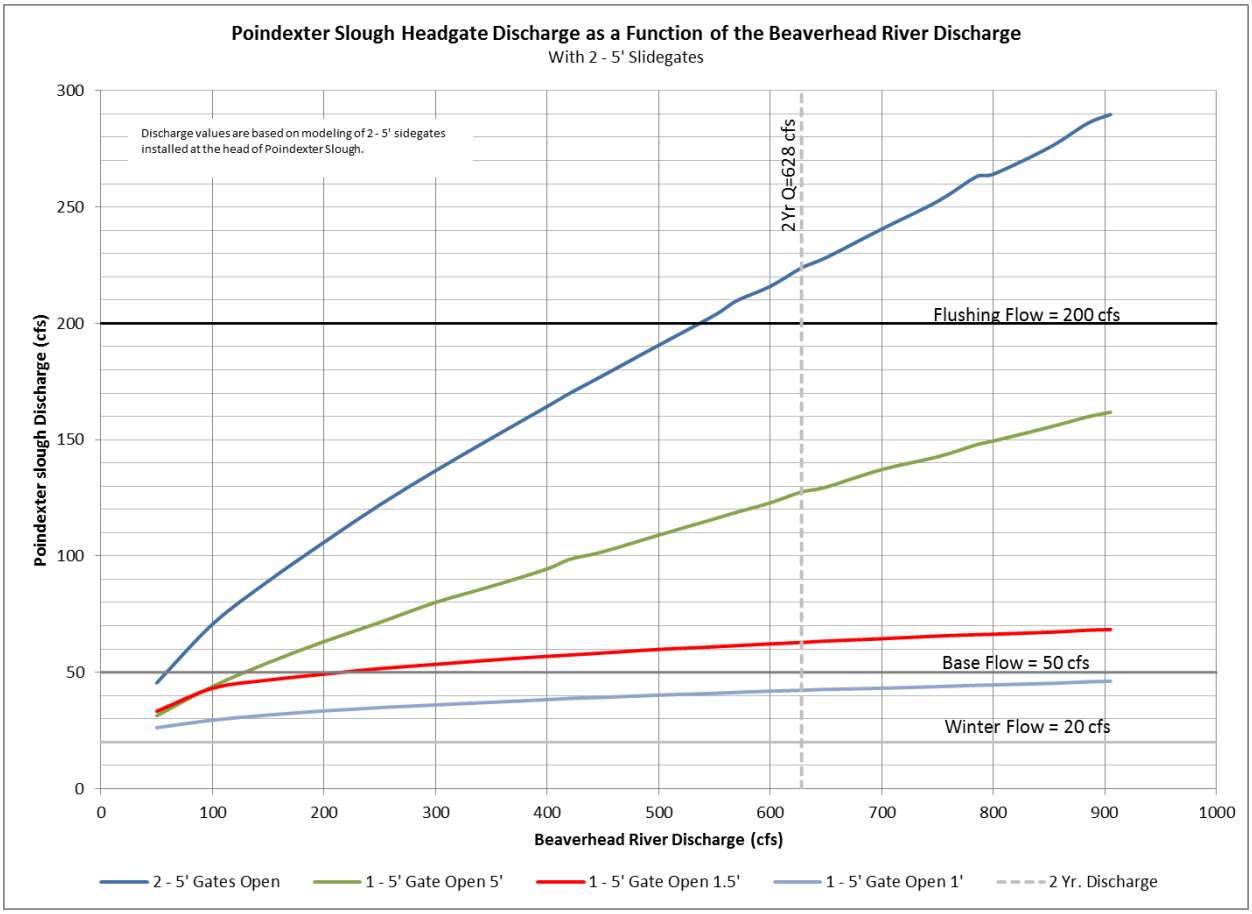


Figure 4. Poindexter Slough discharge as a function of Beaverhead River discharge

Timing of Flushing Flows

Diverting 200 cfs down Poindexter Slough will be possible when the combination of Clark Canyon dam releases, East Bench Irrigation withdraws, and groundwater inputs provide a discharge of approximately 530 cfs at the Poindexter Slough headgate (general scenarios provided in Table 1). Gage records indicate the timing of when these scenarios typically occur is not necessarily predictable. For example, since 1997, peak releases from the Clark Canyon Dam have occurred in May, June, July, and August, and are highly dependent on annual snowpack, summer precipitation, and resulting irrigation demands. Moreover, real-time gage data is currently not available for the East Bench Canal diversion to allow for easy estimation of the Beaverhead River discharge at Poindexter Slough. As a result of these factors, the appropriate timing of flushing flows will require knowledge of dam releases and East Bench Irrigation withdraws.

The ideal timing of a flushing flow in Poindexter Slough would occur in late April through early June to mimic a natural hydrograph and encourage spring spawning activity. However, the current schedule of dam releases and use of the East Bench Canal may often preclude the potential for a flushing flow in Poindexter Slough during this timeframe. If the a flushing flow scenario is to occur between April and early June, Poindexter Slough managers may wish to coordinate with Clark Canyon Dam and East Bench Canal operators to determine a suitable hydrologic plan to meet various irrigation and flow management goals.

Table 1. Hydrologic scenarios necessary to divert 200 cfs into Poindexter Slough.

Clark Canyon Dam Release (cfs)	East Bench Irrigation Withdraw (cfs)	Estimated Groundwater Inputs between Clark Canyon and Poindexter Slough (cfs)	Estimated Discharge of Beaverhead River at Poindexter Slough
490	0	40	530
600	Up to 110	40	530
700	Up to 210	40	530
800	Up to 310	40	530
900	Up to 410	40	530

Duration of Flushing Flows

The duration of flushing flows should vary depending on the discharge and the timeline following the previous flushing flow event. It is recommended the flushing flow be increased from the base flows incrementally, but fairly rapidly over the course of 1-2 days. Flushing flows should be maintained to mobilize sediment and flush fines for approximately 3 days. Alternatively, daily turbidity readings should be taken at the downstream extent of Poindexter Slough during the flushing flow. Once the turbidity readings begin to decrease, flows should be incrementally reduced by closing one of the two gates at the head of the slough. Discharge should be incrementally reduced from flushing to base flows over the course of approximately 3-5 days. Total flushing flow duration should be approximately 7-10 days.

If successfully implemented, a flushing flow of approximately 200 cfs as measured at the head of Poindexter Slough will help to rejuvenate spawning gravels and flush fine sediments from pools. It is anticipated that a 200 cfs flushing flow will be adequate to mobilize most spawning-sized gravels while maintaining pool/riffle features. It is recommended that the initial flushing flow not be implemented until at least one growing season following completion of the stream work, and the first flushing flow be limited to 150 cfs to observe the channel's hydrogeomorphic response to an initial flushing event. Guidance for monitoring the channel's response is included in the following section.

Table 2 illustrates the timing and magnitude of each proposed flow regime and the range of anticipated discharges at the head of the slough, above the Dillon Canal, below the Canal, and at the mouth of the slough.

Table 2. Summary of proposed flow scenarios for Poindexter Slough

Upstream Headgate Discharge Scenario (cfs)	Period of Operation	Discharge Above Dillon Canal Headgate (cfs)	Canal Discharge Scenario (cfs)	Discharge Below Dillon Canal Headgate (cfs)	Discharge at Downstream Confluence with Beaverhead (cfs)
Base Flow (Typical) Q = 50	Spring through Fall (March - October)	68 - 82	Normal Operating Discharge Q = -35	33 - 47	45 - 61
			Closed Q = 0	68 - 82	80 - 96
Base Flow (Minimum) Q = 20	Winter* (November - March)	38 - 52	Closed Q = 0	38 - 52	50 - 66
Flushing Flow Q = 200	Spring (April - June) 7-10 days	218 - 232	Normal Operating Discharge Q = -35	183 - 197	195 - 211
			Closed Q = 0	218 - 232	230 - 246

* Base flows should remain as close to 50 cfs as possible and should only be reduced if Beaverhead River flows do not support diverting 50 cfs into Poindexter Slough

Adaptive Management Recommendations

In order to meet the goals of this project, an adaptive management plan should be implemented that will optimize flow management in Poindexter Slough. The followings steps are recommended to effectively monitor discharges and the resulting influences on the channel.

1. Install Staff Gages

USGS Style C staff gages should be installed to monitor discharges at key locations in Poindexter Slough. Following gage installation, a stage/discharge relationship should be developed for each gage by measuring flows at a range of discharges and recording the corresponding stage during each flow measurement. Recommended locations for staff gages include:

- Immediately downstream of the new headgate at the upstream end of Poindexter Slough.
- Immediately upstream of the Dillon Canal Headgate in a riffle of Poindexter Slough.
- Immediately downstream of the Dillon Canal Headgate in the Dillon Canal.
- In a riffle at the downstream extent of Poindexter Slough.

2. Measure influence of groundwater/surface water inputs to Poindexter Slough

The anticipated range of flows and resultant channel design dimensions along the length of Poindexter Slough are based on relatively few synoptic flow measurements. Additional flow measurements will help to provide a more comprehensive understanding of groundwater influence on the stream over several years, and may help to advise flow management decisions in the future. This may be conducted by:

- Monitoring discharge in Poindexter Slough throughout the year at the locations specified in this FMP to determine the influence of groundwater and surface water along the entire channel.
- Monitoring results may be used to modify the anticipated discharges at the Dillon Canal headgate during various gate operation scenarios at the head of the slough.

3. Optimize aquatic habitat during base flows

Depth and velocity in riffle habitats should be monitored at riffle habitats to determine a range of base flows that provide optimal spawning conditions. This may be conducted by:

- Measuring depth and velocity at a minimum of 10 reference riffle cross sections throughout the project. Log location, results, and discharge in Poindexter Slough at the head of the channel.
- Adjusting gates at head of Poindexter Slough and record depth and velocity at same riffle cross sections again.
- Following determination of optimal base flows, adjust flows at headgate until optimal habitat conditions (see design criteria for optimal spawning conditions) are obtained.

4. Monitor channel response following flushing flows

It will be imperative to monitor the channel's response to periodic flushing flows to assess whether the habitat improvement goals and objectives of the project are met. Monitoring results may be used to revise the magnitude and duration of subsequent flushing flows. The following steps are recommended to establish a monitoring program for this purpose. Post-flushing flow channel parameters may be monitored by:

- Selecting a minimum of 10 pools and surveying cross sections at each pool before and after flushing flows. Document differences in pool depth and length.
- Performing pebble counts in areas where spawning is anticipated (pool tails and riffles) to document the percentage of the bed composed of suitable spawning gravels as well as changes in substrate composition over time.
- Determining the percentage of the stream bed, if any, that is embedded and unsuitable for spawning.
- Performing stream-wide inventory of channel bed and banks after flushing flows to note locations of bank instability, fine sediment accumulation, and coarse sediment accumulation.

OPERATION AND MAINTENANCE AND PROJECT AGREEMENT

THIS OPERATION AND MAINTENANCE AGREEMENT ("Agreement") is made and entered into by and between the **Dillon Canal Company** ("**Canal Co.**"), the **Beaverhead Conservation District** ("**Conservation District**"), and the **Montana Department of Fish, Wildlife, & Parks** ("FWP"), **Paul and Geri Godecke** ("**Godecke**"), and **Roscoe Pilon** ("**Pilon**").

NOW THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

1. **Purpose of Project.** In order to improve and maintain fish habitat by reducing build-up of fine sediment in the Poindexter Slough ("Poindexter"), the Conservation District and FWP intend to modify the Poindexter channel, Canal Company ditch and the associated infrastructure for both to periodically allow effective habitat maintenance flows to pass through the Poindexter Slough.

Under the terms of this Agreement, the Conservation District and FWP's modifications to the Poindexter channel, Canal Company ditch and the associated infrastructure for both shall consist of and be limited to the following activities, which are hereinafter collectively referred to as the "Project":

a. Replacement of the existing 48 in. screw-elevated headgate, which diverts Beaverhead River water into the Poindexter, with two 5 ft screw-elevated headgates capable of conveying periodic increased flows to mobilize sediment and maintain fish habitat.
b. Replacement of two existing 5 ft x 5 ft screw-elevated headgates, one pin-and-plank diversion structure, and one irrigation pump, all located at the Dillon Canal point of diversion on the Poindexter, with two 6 ft x 4 ft screw-elevated headgates, a new pin-and-plank diversion structure, and a new irrigation pump, all set 1.5 feet lower in elevation.
c. Regrading of the upper 3100 ft of the Dillon Canal and adjacent 1,900 ft of the Poindexter to satisfy irrigation requirements at the new diversion and screw-elevated headgate elevations, to prevent seasonal backwater, and to allow for fish movement.
d. Widening of the upper 1,462 ft of the Poindexter to the approximate dimensions that currently established in the middle 10,500 ft of the Poindexter Slough.
e. Construction of a floodplain for the upper 1,462 ft of the Poindexter.
f. Narrowing of the lower 13,104 ft of the Poindexter to the approximate dimensions currently established in the middle 10,500 ft of the Poindexter.
g. Deepening and narrowing of 179 pools throughout the 25,066 ft length of Poindexter, such that fine sediment will be effectively transported and adequate depth maintained to improve adult trout habitat.

h. Revegetation and stabilization of all constructed stream banks with locally salvaged and transplanted sod mats and willows.
i. Utilization of periodic "habitat maintenance flows" through the Poindexter, the magnitude and duration of which is contained in **Appendix 2.**
j. Adherence to the design specifications for the Poindexter's channel dimensions, habitat improvement, revegetation locations, and irrigation infrastructure, all of which are set forth in **Appendix 1.**

2. Duties of the Conservation District. The Conservation District shall:

(a). Secure all necessary funding for the design and construction of the Project;

(b) Perform all necessary environmental analysis and secure all necessary permits;

(c) Solicit design plan bids, select a design firm, review proposed designs and select and approve a final design plan;

(d) Solicit construction bids, select a construction contractor, and administer the project construction contract such that it conforms to the designs and all permit requirements; and

(e) Where needed, obtain the necessary access, whether through easement, license, lease, or other means, for the Project's construction phase, in addition to existing access and maintenance easements held by the Canal Co.

(f) Provide FWP with a written invoice for expenses related to the design and construction for the headgate on the Beaverhead River and modification of channel dimensions and gradient of the Poindexter.

3. **Duties of FWP.** FWP shall:

(a) Be responsible for the coordination, management, and execution of habitat maintenance flows, including the operation of the Beaverhead River headgate during the periods of habitat maintenance flows, as those operations are set forth in **Appendix 2**;

(b) Be responsible for setting non-irrigation season flows in the Poindexter at the Beaverhead River headgate, as those flows are described in **Appendix 2;** and

(c) Be responsible for supplementing irrigation season flows in the Poindexter at the Beaverhead River headgate to deliver their irrigation rights and maintain their instream reservation.

(d) Contribute up to $50,000.00 to the Conservation District for the design and construction of the headgate on the Beaverhead River, as well as for the modification of channel dimensions and gradient of the Poindexter.

4. **Duties of the Canal Co.** The Canal Co. shall:

(a) Be solely authorized to operate and control the Dillon Canal headgates. except when the Canal Co. is not delivering water to irrigators through the Dillon Canal, Godecke may operate the Canal headgates to obtain stockwater.

(b) Be authorized to operate the Beaverhead River headgate to regulate flows to ensure that the Canal Co.'s water rights are delivered;

(c) Be solely authorized to operate and maintain the emergency pin-and-plank diversion structure;

(d) Only use the emergency pin-and-plank diversion structure during times when the Canal Co.'s water rights cannot be diverted without the pin-and-plank diversion structure's use; and

(e) Notify the Conservation District and the FWP within one day if any boards are placed in the emergency pin-and-plank diversion structure. Notification to the Conservation District is satisfied upon telephone contact with Byron Martinell at (406) 925-3652. Notification to the FWP is satisfied upon telephone contact with the Dillon FWP Field Office at (406) 683-9310. Each party shall promptly notify the other parties as to any change in contact information.

5. **Activities During Construction Phase.** The Project's construction phase shall not interfere with the operation of or the flows into the Dillon Canal and the Project shall not interfere with other activities necessary to satisfy the irrigation schedule of the Canal Co.

6. **Habitat Maintenance Flows.** The Project's habitat maintenance flows shall not occur during time periods when the two screw-elevated headgates located at the Dillon Canal point of diversion on the Poindexter are open. The Project's habitat maintenance flows shall not conflict with, or in any way restrict, the period of operation or the irrigation use of the aforementioned headgates by the Canal Co.

7. **Maintenance of the Beaverhead River Headgate.** All parties shall be jointly responsible for the general maintenance of the Beaverhead River headgate not including design and construction. Costs of ongoing maintenance shall be equitably born by the parties.

8. Annual Meeting. The parties shall hold an annual meeting, set no later than March 15, to determine whether a habitat maintenance flow is necessary in that year and to establish the period of use for the aforementioned flow. The period of use shall be mutually agreed upon and strictly adhered to by each of the parties. The parties must determine that the proposed habitat maintenance flow and its period of use:

(a) Satisfies the necessary hydrologic conditions in the Beaverhead River set forth in **Appendix 2**; and

(b) Shall not interfere with the irrigation timing and irrigation demand of the Canal Co.

An additional meeting may be scheduled immediately following the irrigation season, depending on the variable conditions of the year.

9. Impact on Water Rights. The Project shall not in any way impact the use of the Poindexter by the Canal Co., Godecke, or Pilon, including any and all uses associated with the delivery of their water rights.

10. Water Rights. By entering into this Agreement, the Canal Co., Godecke, and Pilon do not abandon or intend to abandon or transfer any water right in whole or in part. Nor do the parties waive, or are estopped from, disputing any water rights and water uses from and through the Beaverhead River and the Poindexter.

11. Indemnification. Each party to this Agreement is responsible for, and shall indemnify and hold harmless all other parties, from and against any and all claims, demands, or actions for damages to property, injury or death to persons, and other damages to persons or entities arising out of or resulting from the performance or results of this Agreement, to the extent that such damage to property, or injury or death to persons, is due, in whole or in part, to the error, omission, negligent act or wanton act of the offending party or any of its employees or agents.

12. Breach, Notice and Remedies. In the event that one party to this Agreement believes that any other party has breached the terms of the Agreement, the complaining party shall send notice by certified mail to all parties to the Agreement specifying the alleged breach. The receiving party has 90 days to cure the default before any enforcement action may be filed. All parties to the Agreement may participate in resolution of the dispute and shall attempt in good faith to reach a mutually-acceptable solution. In addition to other remedies available in law or equity, in appropriate circumstances a court may specifically enforce this agreement.

13. Waiver, Choice of Law, Costs, and Dispute Resolution. The failure of any party to assert a right hereunder or to insist upon compliance with any provision of this Agreement shall not constitute a waiver of that right or excuse any subsequent nonperformance of any such provision. The Agreement, and any violations thereof, shall be governed by the laws of the State of Montana. Any dispute arising out of or relating to

provisions of this Agreement is not subject to mediation or arbitration, unless consented to by all contracting parties involved in the dispute. The venue for any Court action initiated to enforce or interpret this Agreement is Beaverhead County, State of Montana. Each party is responsible for their own fees and costs, including attorney's fees.

14. Termination of Agreement. If the Conservation District and the FWP are unable to gain access to lands sufficient for construction of the project, or construction of the project is impossible due to lack of sufficient funding, political opposition, a judicial decision, or for any other reason, this Agreement is terminated.

15. Term of Agreement. The Agreement shall be in effect for the useful life of the Project, not to exceed 30 years from the date of this Agreement. The Agreement may be renewed by mutual agreement of the parties for a term no greater than 30 years but otherwise agreed upon by the parties.

//

IN WITNESS WHEREOF, the parties have executed this Agreement on the last date written below.

Sam Sheppard
Region 3 Supervisor
Montana Fish, Wildlife & Parks

STATE OF MONTANA)
COUNTY OF Gallatin)

SUBSCRIBED AND SWORN to before me this 16 day of December, 2014.

Signature of Notary

Lisa M. Lundell
Printed Name

LISA M LUNDELL
Notary Public
for the State of Montana
Residing at
Bozeman, Montana
My Commission Expires:
September 25, 2016
(SEAL)

NOTARY PUBLIC for the State of Montana. Residing at Bozeman, Montana. My Commission Expires Sept. 25, 2016

DATED this 16 day of December, 2014.

Approved for legal content by:

12/5/14
Bill Schenk
FWP Legal Counsel

David Cottom

President
Dillon Canal Company

STATE OF MONTANA)
COUNTY OF Beaverhead)

SUBSCRIBED AND SWORN to before me this 11 day of December, 2014.

MARILYN M WILLIAMSON
NOTARY PUBLIC for the
State of Montana
Residing at Dillon, Montana
My Commission Expires
March 21, 2015

Marilyn M Williamson
Signature of Notary

Marilyn M Williamson
Printed Name

NOTARY PUBLIC for the State of Montana. Residing at Dillon, Montana. My Commission Expires March 21, 2015

(SEAL)

DATED this 11 day of December, 2014.

Dan Pilon

Dan Pilon

STATE OF MONTANA)
COUNTY OF Beaverhead)

SUBSCRIBED AND SWORN to before me this 12 day of December, 2014.

Marilyn M Williamson
Signature of Notary

MARILYN M WILLIAMSON
NOTARY PUBLIC for the
State of Montana
Residing at Dillon, Montana
My Commission Expires
March 21, 2015

Marilyn M. Williamson
Printed Name

NOTARY PUBLIC for the State of Montana. Residing at Dillon, Montana. My Commission Expires March 21, 2015

(SEAL)

DATED this 12 day of December, 2014.

Byron Martinell

Byron Martinell, Chair
or Carl Malesich, Vice Chair
Beaverhead Conservation District

STATE OF MONTANA)
COUNTY OF Beaverhead)

SUBSCRIBED AND SWORN to before me this 8 day of December, 2014.

Marilyn M Williamson
Signature of Notary

MARILYN M WILLIAMSON
NOTARY PUBLIC for the
State of Montana
Residing at Dillon, Montana
My Commission Expires
March 21, 2015

Marilyn M Williamson
Printed Name

NOTARY PUBLIC for the State of Montana. Residing at Dillon, Montana. My Commission Expires March 15, 2015

(SEAL)

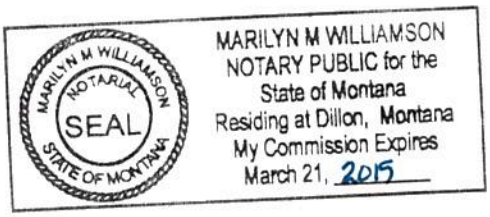
DATED this 8 day of December, 2014.

Paul Godecke

Geri Godecke

STATE OF MONTANA)
COUNTY OF Beaverhead)

SUBSCRIBED AND SWORN to before me this 8 day of December, 2014.



Signature of Notary

Marilyn M Williamson
Printed Name

NOTARY PUBLIC for the State of Montana. Residing at Dillon, Montana. My Commission Expires March 21, 2015

(SEAL)

DATED this 8 day of December, 2014.

MEMORANDUM

To: Matt Jaeger, Area Fisheries Biologist

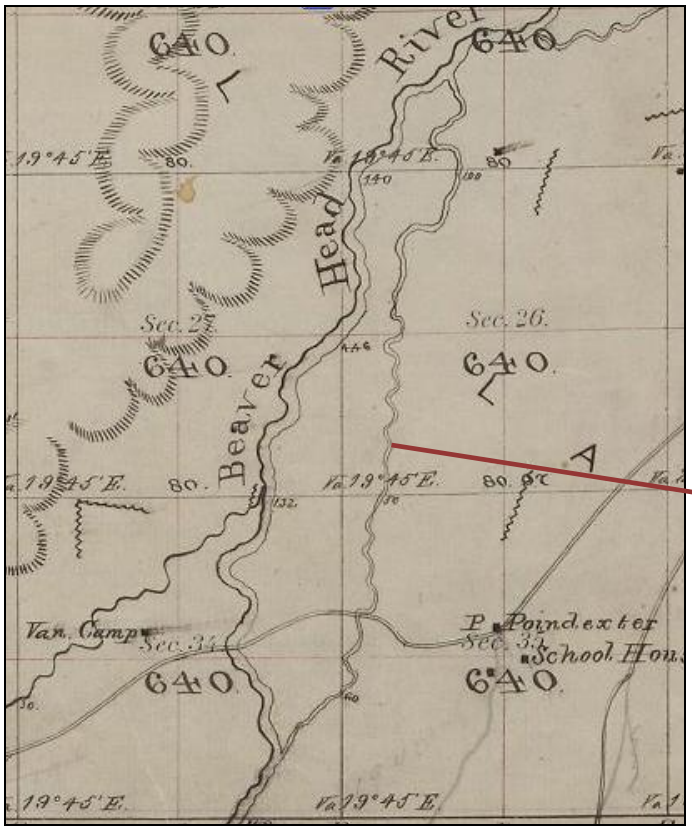
From: Andy Brummond, Water Resources Specialist

Date: October 27, 2010

Subject: Poindexter Slough

This memorandum is in response to your request for clarification of water management and water right issues involving Poindexter Slough.

Poindexter Slough is a channel of the Beaverhead River. The following excerpt from the General Land Office survey plat dating to 1870 shows clearly the water body known today as Poindexter Slough as a channel of the Beaverhead River. Over time the upstream portions of Poindexter Slough have been manipulated in order to regulate flows into Poindexter which supplies several irrigation diversions with the largest being the Dillon Canal. Most recently the connection to the main channel of the Beaverhead River was moved upstream in the early 1980s to its present location.



In many key respects Poindexter Slough is akin to the Mitchell Slough which was subject of a Montana Supreme Court decision in 2008. Like Poindexter's relationship to the Beaverhead, the Mitchell was determined to be a natural channel connected to the Bitterroot River despite the fact that the upper reaches of the Mitchell in particular had been highly manipulated over time. It should be noted whether or not there were instream water rights for the Bitterroot River or the Mitchell Slough was never at issue. The Court found that the year-round diversion into the Mitchell Slough from the Bitterroot River provides more water than necessary to satisfy appropriative needs and this water was a public resource dedicated to the multiplicity of functions of the Mitchell including its function as a natural stream. Notwithstanding the significant manipulation of the channel and flow by man, Poindexter Slough is still a natural channel receiving water in large part from the Beaverhead River main channel just as the Mitchell Slough was found to be a natural channel supplied in part by diversion from the Bitterroot River.

Flows between channels of rivers are manipulated across Montana for varying reasons. For example the Supreme Court noted in the Mitchell Slough Decision that water was manipulated between the East Fork and West Fork channels of the Bitterroot River just upstream of the Mitchell Slough diversion. This manipulation of flow between channels is unto itself not an appropriation of water requiring a water right. Such is the case of providing more flow into Poindexter which is a channel of the Beaverhead River. It should also be noted the Clark Canyon Water Supply Company shares owned by Dillon Canal are delivered at their diversion on Poindexter and not at the headgate on the Beaverhead River main channel further supporting that Poindexter is a channel of the Beaverhead River.

FWP has isntream water rights for the reach of the Beaverhead River. These water rights include a Statements of Claim and a Water Reservation both for 200 cfs. This water right applies to all channels of the Beaverhead River which would include Poindexter Slough. Also, FWP specifically recognized the high fishery value in Poindexter Slough, applying for and receiving a reservation for a 57.9 cfs base flow to specifically protect waters entering Poindexter whether from the main channel of the Beaverhead River or from other points along Poindexter. The upstream reach of the instream reservation is listed as beginning in the SW ¼ Section 3, TWP 8S, RGE 9W, the location to which the connection to the main channel of the Beaverhead River was moved in the early 1980s. The reservation for Poindexter clearly recognizes that water would be diverted from the main channel of the Beaverhead at the present location. While a water right is not necessary to divert water into the Poindexter Slough channel from the Beaverhead main channel, the existing instream flow water rights of FWP further support such action.

The bottom line is even though flows entering Poindexter from the main channel of the Beaverhead are now controlled, Poindexter is still a natural water body and channel of the Beaverhead River despite anthropogenic influences. Diversion of water from the Beaverhead main channel does not require a water right even though FWP's existing instream water rights do further support this activity. Increasing the capacity to divert water into the Poindexter Slough channel is not an expansion of a water right but is simply an effort to restore to some degree the natural function of Poindexter Slough as a channel of the Beaverhead River. However, care should be taken to make sure that increased flow in Poindexter does not cause property damage due to excessive flooding, excessive bank erosion or other mechanisms. Also, the ability of others to exercise their water rights from the reach of the Beaverhead bypassed by the Poindexter Slough channel should be preserved as well. Finally, appropriate stream permitting for the project is required as well.

July 27, 2014

Beaverhead Watershed Committee

Poindexter Slough is a classic spring creek and most of it is public water. It provides not only excellent angling but bird watching, dog walking and just a place to enjoy Montana. ~~and~~ I am a 35 year resident and fishing guide in the area. I think Poindexter needs to be restored to its former glory, it is ### well spent.!

Jim Mosley
350 Smith Rd PO Box 101
Dillon, Mt
59725
406-683-5400

Jim Mosley

(35 years as fishing guide in the area & 26 year former employee Montana Fish Wildlife and Parks Fisheries Division)

July 24, 2014

Dear Concerned,

We own Tom Smith's Backcountry Angler in Dillon, Montana. Tom is the head Outfitter and Mary runs the office and shop. We have a small business that has tried to give back to our community whenever possible. We feel that the Poindexter Slough restoration project proposed by the Beaverhead Watershed Conservation Group would be a big boom to the town of Dillon and area businesses.

We have seen the Poindexter fishery degrade and the number of visiting fishermen decline due to that degradation. The proposed project would put Poindexter Slough back on the map as one of the premier publically accessible spring creek fisheries. Many spring creek fishermen used to travel a loop fishing Silver Creek in Idaho, Poindexter Slough in Montana and the Henry's Fork in Idaho. Now many of these fishermen are staying in Idaho and not visiting Montana. Silver Creek recently did a big renovation and is getting a lot of good press from that restoration. This is drawing fishermen away from Montana. We need to draw them back with this project on Poindexter.

We feel that the project will not only help the area fly fishing businesses, outfitters and guides but the area restaurants, lodging facilities, gift shops, gas stations, grocery stores, etc. Money always trickles down from tourists that visit an area attraction. Fly Fishing people spend a lot of money in the towns that they visit and are a boom to the citizens of those towns.

We are highly supportive of the restorative project for Poindexter Slough that the Beaverhead Watershed Committee is sponsoring.

We would like to thank-you for all your efforts.

Sincerely,

Tom & Mary Smith

Backcountry Angler 426 South Atlantic Street Dillon, Montana 59725
(406) 683-3462 backcountry@backcountryangler.com

July 28, 2014

Beaverhead Watershed Committee

Let me add my voice of support for the grant to help with the Poindexter Slough restoration.

When my family and I moved here in 1980, a prime consideration for living in Dillon was the great outdoor recreational opportunities. Being a novice fly fisherman, I needed to learn the fundamentals and nuances of aquatic entomology, stream hydrology, casting techniques and fly tying. I adopted Poindexter Slough as my school, and, indeed, she was a great classroom to learn all that because of the quality of the fishing experience. The parking lot was usually full of out-of-state cars, and I met many fishermen for whom Poindexter was their destination for the week. Back then I had many fly fishing friends who had Poindexter on their list of places to fish when they arrived for their annual week of fishing in our area. Even, President Jimmy Carter came here by helicopter from West Yellowstone just to fish this stream in the 80's.

Unfortunately, over the next decade there was considerable silting and degradation of the stream resulting in loss of gravel riffles, more muck and as a result less robust hatches and loss of large fish. Hopefully, with restoration it can be the stream it was and even better so once again it will be a destination for blue ribbon fishing.

Ronald V. Loge MD
Dillon, MT

Ron Loge

501 N. Main St.
Twin Bridges, MT 59754
July 28, 2014
RE: Poindexter Slough

Katie Tackett
Beaverhead Watershed Committee
C/O Conservation District
420 Barrett St.
Dillon, MT 59725

Dear Katie Tackett,
Subject: Letter of Support

Let this letter serve as indicative of our company's full support for your efforts to restore Poindexter Slough through the Fishery Enhancement Project.

Poindexter Slough has, historically, been a wonderful fishery, attracting flyfishermen from around the globe. In fact, in our business, we receive customers and guests who have traveled from Japan, Germany, Argentina, Australia, and numerous other countries, all with Poindexter Slough as one of their destinations within Montana. As a manufacturer of bamboo flyfishing rods, we feel that having quality fisheries in the neighborhood of our business enhances our own bottom line, and Poindexter Slough is certainly one of those fisheries that synergizes with our retail efforts.

Many of those travelers we meet wish to experience what Poindexter Slough has historically afforded which is an unparalleled dry-fly fishing experience. In recent years, feedback and our own experience have shown that this fishery has suffered from an influx of sediment and a decrease in the quality of the fishing experience. With such a potential resource, it would be a shame to let it continue to degrade. A careful restoration is certainly merited, and for this reason, we support the Fishery Enhancement Project on Poindexter Slough.

Sincerely,

Glenn Brackett, Owner, Sweetgrass Rods

July 25, 2014

Dear Beaverhead Watershed Committee,

I am involved and work in a business in Dillon, Montana. I feel that the Poindexter Slough restoration project proposed by the Beaverhead Watershed Conservation Group would be a great asset to the town of Dillon and area businesses. It would definitely attract more visitors to this area of Montana. Quality public fishing access is critical and this project targets a large area that is open to the public.

This project will help me and my family but also other area businesses such as lodging facilities, gift shops, gas stations, grocery stores, guides, fly shops, etc.

I support the restorative project for Poindexter Slough that the Beaverhead Watershed Committee is sponsoring.

Sincerely,

Chelsey Bennett

BEAVERHEADWATERSHED@GMAIL.COM

July 25, 2014

Ken Scalzone

267 Buffalo Drive

Dillon, MT 59725

Beaverhead Watershed Committee

Katie Tackett - Coordinator

420 Barrett Street

Dillon, MT 59725

Greetings Katie,

I would like to express my support for the conservation work being done by the Beaverhead Watershed Committee and cooperating support organizations to help restore, protect, and improve Poindexter Slough. I recreate, along with my family and friends, on a regular basis at Poindexter Slough. We enjoy not only the fishing & hunting opportunities but also bird watching & other nature watching opportunities. It is important to have this public waterway available and in the best health and stability possible as it attracts not only the locals such as myself but also countless visitors from around the state & country. We are fortunate to have a public place to recreate, walk, and enjoy nature so close and available to so many. Thank you for your work and continued efforts to restore, protect, and improve Poindexter Slough.

Respectfully & sincerely,

Ken Scalzone

CITY OF DILLON, MONTANA

125 N. IDAHO
DILLON, MT 59725

JOHN S. (JS) TURNER
DIRECTOR OF OPERATIONS

NEAL STRAUS
TREASURER

SHEA ERWIN
CITY JUDGE

MICHAEL KLAKKEN
MAYOR

406-683-4245
FAX 406-683-6361

JANI OLSEN
CLERK

JAMES DOLAN
ATTORNEY

7-29-2014

To whom it may concern:

RE: Poindexter Slough Enhancement Project

I am writing this letter in support of the Poindexter Slough Enhancement Project. This fishery has enticed many fishermen over the years to test their angling skills. This project will improve the habitat for the fish which means more fish, more fish means more dollars to the local economy. I believe that investing in the local economy by granting the Watershed Committee the needed funds to complete the project is definitely in the best interest of the State of Montana.

On a personal note, this is where my Grandfather, Homer Turner, taught me the joy and art of fly fishing. We spent many days throughout the years enjoying each other's company at Poindexter Slough.

Sincerely,

J.S. Turner

J.S. Turner
City of Dillon
Director of Operations